Long-Term Mental and Physical Health Outcomes for Male Victims of Unwanted Sexual Violence: A Systematic Review

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Abstract

Sexual violence (SV) victimization is a public health concern however knowledge about male victims of SV lags behind that of female victims. Studies have explored mental and physical health outcomes related to sexual victimization in females, but a paucity of literature has focused on male victimization. The goal of this project was to systematically review published literature that focused on male SV victims and critically examine associations between SV victimization and longer-term mental and physical health outcomes. Thirty-eight studies were systematically reviewed between September and December 2015. CINAHL, PsycInfo, and PubMed were searched with pre-determined terms. Inclusion criteria were: full-text articles published in English between the years 1996-2015; male participants with adulthood and/or lifetime sexual victimization; findings for male gender reported; and mental or physical health outcomes included. Review bias is possible due to intra-rater reliability. Of the thirty-eight studies included in this review, five were comprehensive reviews, thirty-two were cross-sectional studies, and two were longitudinal studies. Seven studies included only mental health outcomes and eleven studies included only physical health outcomes. Twenty studies focused on both mental and physical health outcomes. Depression (n=17), suicidal ideation (n=10), and suicidal attempts and/or self-harm (n=10) were mental health outcomes positively related to a history of sexual victimization. Alcohol abuse (n=12), somatic symptoms (n=9), and drug use (n=8) were physical health outcomes positively related to a history of sexual victimization. The strength of the evidence includes studies from interdisciplinary journals and inclusion of various male populations including the incarcerated, those in clinical settings, and those residing in community dwellings. A noted limitation was the lack of consistency in defining SV. Other limitations were small sample sizes, cross-sectional designs, and retrospective studies. Sexual

victimization impacts both mental health and physical health outcomes for some men at the time of victimization and later in life.

Introduction

According to the Centers for Disease Control and Prevention (CDC), in 2010, enough men experienced acts of sexual violence to fill Michigan Stadium in Ann Arbor, Michigan—the largest American football stadium with a capacity of almost 110,000—approximately 55 times (Black, Basile, Breiding, Smith, Walters, Merrick, Chen, & Stevens, 2011). Sexual violence victimization is a major public health concern for both men and women in the United States. Unfortunately, the topic of sexual violence (SV) victimization is rarely explored, particularly focusing on male victims of SV. This paucity of literature is surprising since the CDC reported in 2011 that, based on the results of the 2010 National Intimate Partner and Sexual Violence Survey, approximately 1 in 71 (1.4%) men has been a victim of rape in his lifetime, and 1 in 5 (22.2%) men has been a victim of sexual violence other than rape in his lifetime (Black et al., 2011). These victimization rates are alarming, especially because the prevalence of sexual victimization is thought to be severely under-reported among male victims due to rape myth acceptance and the stigma associated with victimization (Aosved, Long, & Voller, 2011; Bullock & Beckson, 2011; Choudhary, Coben, & Bossarte, 2008; Choudhary, Coben, & Bossarte, 2010; Coxell & King, 1996; Cucciare, Ghaus, Weingardt, & Frayne, 2011; Davies, 2002; Peterson, Voller, Polusny, & Murdoch, 2010; Tewksbury, 2007; Walker, Archer, & Davies, 2005a,b; Zinzow, Grubaugh, Frueh, & Magruder, 2008).

Rationale for This Study

Research concentrating on male victims of sexual violence is crucial in understanding the severity of the long-term impact of SV on male victims, especially for healthcare professionals. Studies show that male victims often do not report the sexual violence they experience to the police or medical professionals (see above citations), and a significant percentage of victims that

do report their experience of sexual violence do so because of immediate physical trauma that needs medical attention (Choudhary, 2010; Davies, 2002; Masho & Anderson, 2009; Tewksbury, 2007; Walker et al., 2005a). Each year, thousands of cases of male SV are missed by healthcare providers in emergency care, mental health, hospital, and primary care settings due to both the under-reporting of the violence by the victim and a lack of routine SV screening of male clients. Routine screening in each of these settings is crucial to identifying these victims and providing support and care, whether the victimization took place recently or in the past, because outcomes of SV victimization can have a long-lasting effect. Increasing research in this field will identify additional health outcomes associated with SV victimization that have not yet been fully explored as well as more effective ways to screen male patients for a history of SV, giving practitioners an increased knowledge base necessary to understand the implications of SV victimization specifically for males.

Objectives

Studies show that sexual violence victimization is associated with a variety of short-term and long-term negative physical health and mental health outcomes; however, the impact of SV victimization has not been fully explored for adult male victims. This review seeks to answer the research questions: “Do men with a history of adult or lifetime sexual violence victimization experience any mental health outcomes later in life?” and, “Do men with a history adult or lifetime sexual violence victimization experience any physical health outcomes later in life?” This review will also examine key long-term mental health outcomes and physical health outcomes that have been associated with adult male victims of sexual violence. Studies of sexual violence victimization show evidence for long-term and short-term physical and psychological outcomes for both male and female victims (see introduction for citations). While research on

outcomes for female SV victims has been more extensive, research is beginning to find similarities between outcomes for both male and female victims, suggesting that the characteristics and aftermath of SV victimization are comparable between the two genders (Choudhary, Smith, and Bossarte, 2012; Nayak, Lown, Bond, & Greenfield, 2012; Pimlott-Kubiak & Cortina, 2003; Smith & Breiding, 2011; Struckman-Johnson & Struckman-Johnson, 2006; Sundaram, Laursen, & Helweg-Larson, 2008). This literature review, however, will focus exclusively on associated outcomes for male sexual violence victims and therefore will not include data for female sexual violence victims.

Background of the Problem

Historical Context

Research on sexual violence began in the 1960s; however, until the 1980s, most sexual violence research focused almost exclusively on female victims (Evrard, J.R., & Gold, E.M., 1979; Hayman, C.R., Stewart, W.F., Lewis, F.R., Grant M., 1968). In the 1980s, more studies began to include males as victims of sexual violence (Anderson, C.L., 1982; Burnam, M. A., Stein, I A., Golding, J. M., Siegel, J. M., Sorenson, S. B., Forsythe, A. B., & Telles, C. A, 1988; Sarrel, P.M. & Masters, W.H., 1982), but the majority of these early studies focused on prevalence of SV (Koss, M.P., Gidycz, C.A., & Wisniewski, N., 1987; Sorenson, S.B., Stein, J.A., & Siegel, J.M., Golding, J. M., & Burnam, M.A 1987) rather than outcomes associated with SV. Studies focusing on male SV victims have historically utilized vulnerable populations, such as children (Browne, A., & Finklehor, D., 1986; Fromuth M., & Burkhart, B., 1989; Johnson, R.L. & Shrier, D.K., 1985; Nielsen, T., 1983), prisoners (Lockwood, D., 1980; Tewksbury, R., 1989; Wiggs, J.W., 1989), and men who have sex with men (MSM) (Hickson, F.C.I., Davies, P.M., Hunt, A.J., Weatherburn, P., McManus, T.J., & Coxon, A.P.M., 1994; Waterman, C.K.,

Dawson, L.J., & Bologna, M.J., 1989), rather than general community populations. Although efforts are being made to increase the knowledge on adult male victims of sexual violence, a knowledge gap exists that suggests that research on male SV victims is severely lagging behind research focused on female SV victims (Choudhary et al., 2010; Coxell & King 1996; Davies 2002; Tewksbury, 2007; Sundaram et al., 2008; Walker et al., 2005a).

Historically, sexual violence has not been perceived by society as a health concern or topic for males, which may partially explain why research on male SV victims lags behind that of female SV victims. Rape myth acceptance, gender roles, and prevalence rates have been utilized to invalidate male SV victimization (Aosved et al., 2011; Bullock & Beckson, 2011; Davies, 2002; Masho & Anderson, 2009; Peterson et al., 2010; Turchik, 2011). Indeed, the majority of studies show that adult female victims are more common than adult male victims (Choudhary et al., 2012; Choudhary et al., 2008; Ellickson et al., 2005; Elliot et al., 2004; Nayak et al., 2012; Pimlott-Kubiak & Cortina, 2003; Smith & Breiding, 2011; Zinzow et al., 2008; Zweig et al., 1997); however, the range of male victims in studies varies, with several studies showing prevalence rates between 14% and 16% (Aosved et al., 2011; Hart-Johnson & Green, 2012; Hequembourg et al., 2011; Ratner et al., 2003; Zweig et al., 1997) and one study identifying male SV victim prevalence rates of over 50% (Turchik, 2012) suggesting that SV victimization is a prevalent issue for men.

Rape Myths

Numerous rape myths exist that deny the possibility of male sexual victimization and negate the seriousness of the victimization for male victims. Rape myths express the ideologies that women cannot sexually victimize men because an erection implies consent and suggests enjoyment of a sexual act rather than rejection (Bullock & Beckson, 2011; Coxell & King, 1996;

Zweig et al., 1997) and that women cannot sexually victimize men because women are physically weaker than men and cannot use force to make a man submit to sexual violence (Coxell & King, 1996; Davies, 2002; Zweig et al., 1997). Other rape myths claim that SV victimization has a minimal effect on males, especially compared to female victims (Aosved et al., 2011; Coxell & King, 1996; Davies, 2002; Masho & Anderson, 2009; Turchik, 2011), invalidating the long-term effects that have been associated with male SV victimization. Other rape myths portray male victims as weak and effeminate if they cannot defend themselves (Aosved et al., 2011; Amos et al., 2008; Davies, 2002; Masho & Anderson, 2009). Rape myths of sexual minority men (i.e., MSM) portray victims as "wanting" the victimization to occur and/or enjoying the victimization (Bullock & Beckson, 2011; Coxell & King, 1996; Walker et al., 2005a).

Rape myth acceptance by society creates social stigma for victims to report their victimization for fear of judgment, retaliation, or not being believed. This stigma leads to an underreporting in research studies, perpetuating the idea that sexual victimization is not relevant to men. As male sexual violence victimization has become more commonly talked about in the media and academia, researchers are beginning to more widely explore the phenomenon of male sexual victimization (Sundaram et al., 2008).

Purpose of this Review

The purpose of this literature review is three-fold. First is to determine if there is a connection between sexual violence victimization and long-term, rather than immediate, physical or mental health outcomes. Second is to gather and analyze what is currently known on health outcomes of male sexual violence victims and report on it in one place, including gaps in the

literature that need to be addressed. Third is to examine data from a nursing perspective to identify interventions that could be implemented.

Significance of this Review

This review is significant because few, if any, systematic reviews have been conducted on male victimization of sexual violence. Further, the paucity of past reviews were not conducted in the past six years. Consequently those reviews may not be reflective of current literature. In addition, to our knowledge, this is the first review to look at this topic from a nursing perspective. This review is novel because it gathers what is currently known about the long-term physical and mental health consequences of sexual violence for male victims, explores possible interventions from a nursing perspective, and seeks to find gaps in the literature for areas of future research.

Conceptual Framework of Reference

Holistic nursing care focuses on caring for an individual as a whole person. Holistic nursing challenges us to recognize the interconnectedness of one's body, mind, emotion, spirit, social and cultural characteristics, relationships, context, and environment while assessing the needs of all dimensions for the optimal healing of an individual. Holistic nursing concentrates not only on the patient's presenting concern, but determines how an individual's past experiences impacts current health outcomes. For this review, the holistic care framework is appropriate because survivors of sexual violence may exhibit negative mental health outcomes or physical health outcomes that have not been previously treated due to the avoidance of medical or psychiatric treatment immediately following the event (Cucciare et al., 2011; Elliott et al., 2004; Masho & Anderson, 2009; Peterson et al., 2010; Pimlott-Kubiak & Cortina, 2003; Sundaram et al., 2008; Tewksbury, 2007; Turchik, 2012; Walker et al., 2005a). The short term and long term

physical health outcomes and/or mental health outcomes associated with SV may be the underlying factor for a person seeking treatment (i.e., somatic symptoms), or may lead to complications, incompliance, or ineffectiveness of treatments due to psychological symptoms, physical symptoms, and/or substance abuse. By assessing the individual's holistic needs, care is able to be given to heal the patient's presenting concern in the most optimal way by addressing factors that may interfere with a patient's healing.

Methods

Search and Selection Process

Searches for this review were conducted between September and December 2015. Databases PubMed, PsycInfo, and CINAHL were searched with predetermined terms "(sexual abuse OR rape) AND victimization" and "(sexual violence) AND (chronic health OR physical health OR somatic symptoms)". These terms were selected to include studies focusing on multiple types of sexual violence victimization and general physical health outcomes as these were more rarely assessed than mental health outcomes. Limitations of searches included (1) peer-reviewed searches; (2) articles published after 1996; (3) articles published in English; and included filters on male sex and adult/young adult age. From these database searches, 2,901 studies were identified for potential use. An additional 12 studies were identified through snowballing and reverse snowballing (See Figure 1). The titles and abstracts of all 2,913 studies were screened for inclusion in this systematic review. Of the abstracts screened, 2802 were excluded from inclusion because they did not meet eligibility criteria. The full-text articles of the remaining 111 studies were assessed for eligibility. Only thirty-eight of these studies were ultimately included in the present systematic review—seventy-three were excluded for not meeting eligibility criteria. Of the thirty-eight studies included in this review, five were

comprehensive reviews, thirty-one were cross-sectional studies, and two were longitudinal studies. Seven studies included only mental health outcomes and eleven studies included only physical health outcomes. Twenty studies focused on both mental and physical health outcomes.

Eligibility Criteria

Articles eligible for inclusion in this review included full-text articles published in English between the years 1996-2015. Participants included men with adulthood and/or lifetime sexual victimization. Findings reported male findings separately from female findings for articles that analyzed both genders. Lastly, either mental health or physical health outcomes were included in the findings. Articles specifically excluded were those that only included female SV victims or that included only childhood participants, though the age of an adult varied by study.

Limitations and Risk of Bias

Although this systematic review is significant, it is not without limitations. First, this review of the literature is not all-inclusive. Literature not included for this review include: articles published prior to 1996, articles not published in English, lack of full-text articles, studies that included only female participants, studies that did not separate results by gender, and studies that only included victims of childhood sexual violence. This systematic analysis is also limited in that the majority of studies included had relatively small sample sizes and were cross-sectional in design. Having studies with larger sample sizes might increase the accuracy of results and could potentially help to clarify the relationship between SV history and various outcomes. Because of the cross-sectional design of studies, no causal relationship can be determined about the relationship of these variables. The majority of these studies are also retrospective and self-report based; there is potential for recall bias, under-reporting, and over-reporting. More research is needed on this subject to further evidentiary support of these

outcomes. Many of the studies included in this review were qualitative in design, so that no relevant statistics were given for outcomes, or lacked a control sample, so a comparison could not be made between the victimized sample and a non-victimized sample for outcome frequency. In addition, there was a lack of consistency among studies for the definition of sexual violence. Some articles were broad in the interpretation of what was considered to be sexual violence (i.e., any unwanted sexual contact including unwanted kissing or petting), and others were very specific about what was considered sexual violence (i.e., unwanted penetration only). This range in definitions could potentially play a factor in the strength of the relationship between outcomes and sexual violence victimization history, because a history of unwanted penetration could lead to worse outcomes in comparison to a history of unwanted kissing only. More research on this topic needs to be done to determine the relationship between definition of sexual violence and severity of outcomes. Lastly, there is a risk of bias in that one single author screened articles for inclusion, meaning that there is a risk of exclusion of articles based on the author's potential bias.

Data Analysis

Pearson correlation coefficients and odds ratios were collected from individual studies to determine the general strength and direction of relationships between sexual violence victimization history and various mental health and physical health outcomes. Although descriptive statistics, such as percentages, were used in many individual studies to identify prevalence rates for specific SV victimization outcomes, these descriptive statistics were not used in this systematic review, as the descriptive statistics do not offer a comparison between victimized and non-victimized populations.

Male Sexual Victimization and Mental Health Outcomes

Major mental health outcomes found through examination of studies include depression (Aosved et al., 2011; Chan, Straus, Brownridge, Tiwari, & Leung, 2008; Choudhary et al., 2010; Choudhary et al., 2012; Coxell & King, 1996; Elliott, Mok, & Briere, 2004; Hidaka, Operario, Tsuji, Takenaka, Kimura, Kamakura, & Ichikawa, 2014; Masho & Anderson, 2009; Murdoch, Pryor, Polusny, & Gackstetter, 2007; Peterson et al., 2010; Pimlott-Kubiak & Cortina, 2003; Rentoul & Appleboom, 1997; Shorey, Sherman, Kivisto, Elkins, Rhatigan, & Moore, 2011; Struckman-Johnson & Struckman-Johnson, 2006; Tewksbury, 2007; Walker et al., 2005a,b; Wolff & Shi, 2009; Zweig, Barber, & Eccles, 1997), anxiety (Choudhary et al., 2012; Elliott et al., 2004; Peterson et al., 2010; Próspero & Fawson, 2010; Rentoul & Appleboom, 1997; Shorey et al., 2011; Walker et al., 2005a,b), suicidal ideation and suicidal activity (Coxell & King, 1996; Hidaka et al., 2014; Masho & Anderson, 2009; Peterson et al., 2010; Ratner, Johnson, Shoveller, Chan, Martindale, Schilder, Botnick, & Hogg, 2002; Rentoul & Appleboom, 1997; Struckman-Johnson & Struckman-Johnson, 2006; Sundaram et al., 2008; Tewksbury, 2007; Walker et al., 2005a,b; Zinzow et al., 2008), and post-traumatic stress disorder (Aosved et al., 2011; Coxell & King, 1996; Davies, 2002; Hart-Johnson & Green, 2012; Murdoch et al., 2007; Peterson et al., 2011; Rentoul & Appleboom, 1997), among others (see Table 1).

Common mental health outcomes explored include depression, anxiety, suicidal ideation, and distress. The correlation between depression and positive sexual victimization history produced mixed results ranging from small effect to large effect (See Table 2). Some studies reported that victims with a history of sexual victimization were approximately three times more likely to be depressed than their non-victimized peers. The relationship between anxiety and sexual victimization history is mostly strong. Most studies (n=4) have found a moderate to strong positive correlation. Studies have shown that those with a sexual victimization history are two to

three times more likely to ideate suicide and are two to four times more likely to attempt suicide or harm oneself, compared to their non-victimized peers. The relationship between sexual victimization and post-traumatic stress disorder (PTSD) is not well understood. There appears to be a positive correlation, but results indicate that this relationship may be weak to moderate. Compared to those without a history of sexual victimization, some studies suggest that those with a positive sexual victimization history are two to four times more likely to experience global psychiatric distress. Overall, a history of sexual victimization has a significant impact on several key mental health outcomes later in life. Those with a history of sexual victimization are significantly more likely to suffer from depression, suicidal thoughts, anxiety, psychiatric distress, and attempt suicide or self-harm when compared to the general population.

Male Sexual Victimization and Physical Health Outcomes

Major physical health outcomes include alcohol and other drug (AOD) abuse (Amos, Peters, Williams, Johnson, Martin, & Yacoubian, 2008; Cucciare et al., 2011; Coxell et al., 1999; Davies, 2002; Hequembourg, Bimbi, & Parsons, 2011; Hidaka et al, 2014; Nayak et al., 2012; Peterson et al., 2010; Pimlott-Kubiak & Cortina, 2003; Ratner et al., 2002; Smith & Breiding, 2011; Sundaram et al., 2008; Snipes, Green, Benotsch, & Perrin, 2014; Tewksbury, 2007; Turchik, 2012), development of general somatic symptoms (Black et al., 2011; Golding, 1999; Hart-Johnson & Green, 2012; Murdoch et al., 2007; Próspero & Fawson, 2010; Rentoul & Appleboom, 1997; Sundaram et al., 2008; Tewksbury, 2007; Walker et al., 2005b), and sexual dysfunction (Coxell & King, 1996; Davies, 2002; Elliott et al., 2004; Peterson et al., 2011; Tewksbury, 2007; Turchik, 2012; Walker, 2005a), among others (see Table 1).

Many studies have looked at the link between sexual victimization and alcohol use (n=7). However, the relationship between these two factors is not well understood. Some studies report

a weak relationship (n=3) between the two, while others report that a victimization history increases alcohol use risk by one and a half to three times that of those without a history of victimization (See Table 3).

Multiple studies have looked at the relationship between sexual victimization and illicit drug use (n=7). The results have been mixed. Though all results agree that there is a positive relationship between the two, some studies have found a very strong relationship while others have reported a weak relationship.

Other physical health outcomes explored include somatic symptoms, HIV risk sexual dysfunction, and tobacco use. The relationship between sexual victimization history and somatic symptoms appears to be positive and moderate to strong, with more recent studies finding a strong relationship between the two. A history of sexual victimization has a moderately strong positive relationship to sexual dysfunction later in life. Sexual victimization increases the risk of developing an STI/HIV by one and a half to three and a half times, compared to those without a sexual victimization history. Someone with a history of sexual victimization is two to four times more likely than his non-victimized peer to use tobacco.

Other complications, such as sleep difficulties, poor general health, high cholesterol, joint disease, and activity limitations, are just starting to be studied. However, results have shown that those with a history of victimization are more likely than their non-victimized peers to report these complications. More research should be done on these complications to more accurately determine the relationship between sexual victimization history and these outcomes.

Overall, a history of sexual victimization has a significant impact on several key physical health outcomes later in life. Those with a history of sexual victimization are significantly more likely to use alcohol, illicit drugs, and tobacco; suffer from somatic symptoms, sexual

dysfunction, and STIs/HIV; and experience poorer general health than those in the general population.

Discussion

The results from this review show that male sexual violence victimization is positively correlated with several severe long-term mental health and physical health outcomes. These outcomes have the potential to last decades after victimization. Without adequate treatment, these outcomes could lead to even more severe consequences, such as reduced functional ability from depression and anxiety, suicide, and organ disease from substance use.

No known previous study has focused on the impact of male sexual violence victimization from a nursing perspective. Nurses interact with patients with many different backgrounds and experiences, regardless of where care is delivered. It is important for nurses and other healthcare professionals to understand the implications of working with both female and male victims of SV and to understand the associations between victimization and health outcomes to better assess one's patients' needs holistically.

Research focusing on the long-term mental and physical health outcomes of sexual violence for male victims is vital, because a broader knowledge base on this population has the potential to reduce healthcare provider bias on victims of SV victimization, lead to better treatment opportunities to care for the victim holistically, and, overall, create better mental health and physical health outcomes for the victim. Like the general population, healthcare providers are susceptible to the media and stereotypes, and may assume that sexual violence victimization is a "female-only" problem, and that men do not need to be screened for victimization history. With the development of the knowledge base on this topic, however, public opinion, including that of healthcare providers, may change to include the acknowledgment that sexual violence

victimization is an issue for both males and females. By understanding more about the phenomenon of male SV victimization, including common health outcomes associated with SV victimization, healthcare providers will be able to more accurately assess patients for a history of victimization. With more accurate screening, healthcare providers will be able to determine individualized patient needs (Davies, 2002) and provide personalized medical attention, counseling, advocacy, resources, and education that are crucial in creating the overall best health outcomes possible.

Although this systematic review shows evidence of a link between sexual victimization and numerous mental health and physical health outcomes later in life, this review is not without limitations. First, this review of the literature is not all-inclusive. Literature not included for this review include: articles published prior to 1996, articles not published in English, lack of full-text articles, studies that included only female participants, studies that did not separate results by gender, and studies that only included victims of childhood sexual violence. This systematic analysis is also limited in that the majority of studies included had relatively small sample sizes and were cross-sectional in design. Having studies with larger sample sizes might increase the accuracy of results and could potentially help to clarify the relationship between SV history and various outcomes. Because of the cross-sectional design of studies, no causal relationship can be determined about the relationship of these variables. The majority of these studies are also retrospective and self-report based; there is potential for recall bias, under-reporting, and over-reporting.

More research is needed on this subject to further evidentiary support of these outcomes. Many of the studies included in this review were qualitative in design, so that no relevant statistics were given for outcomes, or lacked a control sample, so a comparison could not be

made between the victimized sample and a non-victimized sample for outcome frequency. In addition, there was a lack of consistency among studies for the definition of sexual violence. Some articles were broad in the interpretation of what was considered to be sexual violence (i.e., any unwanted sexual contact including unwanted kissing or petting), and others were very specific about what was considered sexual violence (i.e., unwanted penetration only). This range in definitions could potentially play a factor in the strength of the relationship between outcomes and sexual violence victimization history, because a history of unwanted penetration could lead to worse outcomes in comparison to a history of unwanted kissing only. More research on this topic needs to be done to determine the relationship between definition of sexual violence and severity of outcomes. Lastly, there is a risk of bias in that one single author screened articles for inclusion, meaning that there is a risk of exclusion of articles based on the author's potential bias.

Gaps in the literature include a lack of information regarding SV victimization history and chronic physical health conditions, outcomes related to revictimization, and outcomes related to the victim-perpetrator relationship. Chronic physical health conditions, such as obesity, diabetes, and cancer, are among the top medical concerns in America. However, other than the single study completed by Smith and Breiding (2011), no other known study has been conducted in determining a relationship between sexual victimization history and chronic disease. Especially for healthcare providers, this is an important topic to gain knowledge on, as early intervention for SV victims could potentially decrease the individual's risk of developing serious chronic conditions. Re-victimization, or an individual being victimized more than once, is a very common occurrence for sexual violence victims (Aosved et al., 2011). Although this phenomenon is common, its effects have rarely been studied; it is necessary to determine the relationship between mental health and physical health outcomes for this sub-population of

victims as well, because it is possible that the relationship between outcomes gets stronger with increased SV exposure, and victims may need more support and treatment than those victimized a single time. Because of small sample sizes in the studies, few studies compared outcome frequency based on the victim-perpetrator relationship. This could be an important aspect to study for healthcare providers, especially because intimate partner violence or family violence could change the dynamic of an individual's needs in treatment and could possibly alter how strong of an effect the violence has on the individual's outcomes.

Other areas for future research include studies on the effectiveness of current treatments for male victims of sexual violence, the relationship between mental health and physical health outcomes to multiple forms of violence, and development of evidence-based guidelines for assessing and treating male victims of sexual violence. Mental health and physical health outcomes for multiple forms of violence should be researched further, as victims of interpersonal violence rarely suffer from one singular type of violence. Although one study (CITATION) did focus on multiple forms of victimization, this is something that should be researched further. Lastly, currently in the United States, there are few treatment centers that cater specifically to male victims of sexual violence or offer alternative treatments for male victims compared to female victims. Future research should assess the effectiveness of current treatments compared to treatments that cater specifically to male victims, to determine ways to improve outcomes for all male SV victims. With more knowledge about appropriate treatments for male SV victims, evidence-based guidelines can be created to more accurately assess and treat victims in order to create better patient health outcomes.

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Figure 1. Study Selection Methodology

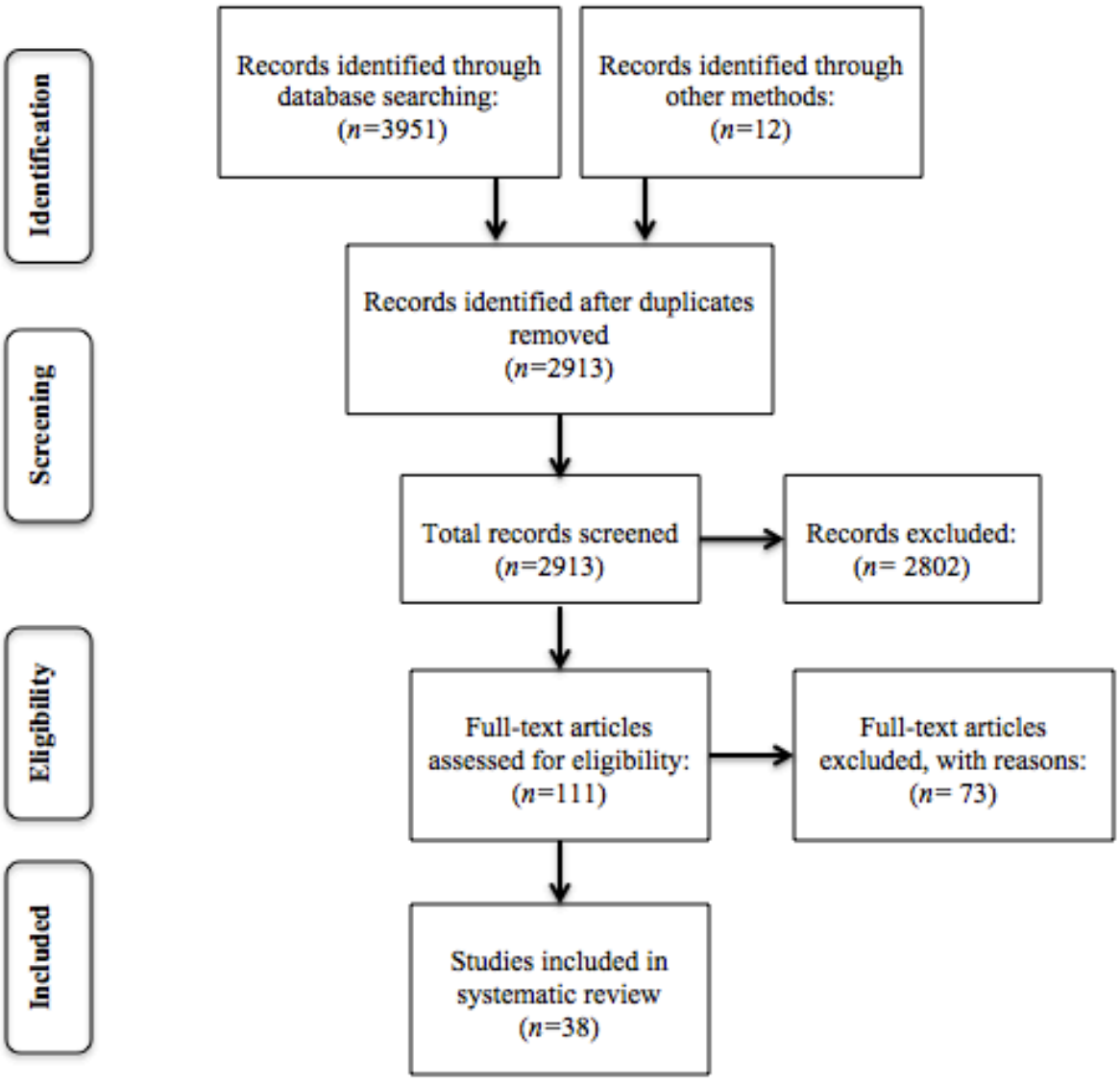

Table 1. Prevalence of Mental and Physical Health Outcomes Associated with Male Sexual Violence Victimization in Individual Studies

Mental Health Outcome	*n*=	Percent of Total Articles (%)
Depression	18	47.4
Suicidal Ideation	10	26.3
Suicidal Attempt/ Self-Harm	10	26.3
Anxiety	9	23.7
Hatred/Hostility/Anger	8	21.1
PTSD	7	18.4
Flashbacks/Nightmares	7	18.4
Low Self-Esteem	6	15.7
Global Psychiatric Distress	6	15.7
Physical Health Outcome		
Alcohol Abuse	13	34.2
Illicit Drug Use	10	26.3
Somatic Symptoms (General)	9	23.7
Sexual Dysfunction	8	21.1
HIV/STI prevalence	6	15.7
Sleep Difficulties (General/Insomnia)	6	15.7
Activity Limitations	5	13.2
Tobacco Use	5	13.2
Poor Physical Health (General)	4	10.5
Disordered Eating	1	2.6
High Cholesterol	1	2.6
Joint Disease	1	2.6

NOTE: Percentages do not add up to 100% because multiple studies analyzed more than one health outcome.

Table 2. Correlations and Odds Ratios for Mental Health Outcomes Associated with Male Sexual Violence Victimization

Mental Health Outcome	Study	Statistic
Depression		
	Aosved et al., 2011	*r*= .10
	Chan et al., 2008	*r*= .43
	Choudhary et al., 2012	OR= 3.11
	Elliott et al., 2004	*r*= .27
	Hidaka et al., 2014	OR= 1.55
	Murdoch et al., 2007	*r*= .68
	Pimlott-Kubiak & Cortina, 2003	*r*= .34
	Ratner et al., 2003	OR=3.25
	Walker et al., 2005b	*r*= .62
	Zweig et al., 1997	*r*= .16
Anxiety		
	Choudhary et al., 2012	OR= 4.75
	Elliott et al., 2004	*r*= .24
	Murdoch et al., 2007	*r*= .65
	Próspero & Fawson, 2010	*r*= .75
	Walker et al., 2005b	*r*= .46
Suicidal Ideation		
	Ratner et al., 2003	OR= 2.75
	Zinzow et al., 2008	OR= 3.80
Suicidal Attempt/ Self-Harm		
	Chan et al., 2008	*r*= .52
	Coxell et al., 1999	OR= 4.30
	Hidaka et al., 2014	OR= 2.25
	Ratner et al., 2003	OR= 1.82
PTSD		
	Aosved et al., 2011	*r*= .14
	Murdoch et al., 2007	*r*= .57
Psychiatric Distress		
	Aosved et al., 2011	*r*= .12
	Choudhary et al., 2010	OR= 2.18
	Coxell et al., 1999	OR= 1.73
	Zinzow et al., 2008	OR= 4.29

Table 3. Correlations and Odds Ratios for Physical Health Outcomes Associated with Male Sexual Violence Victimization

Physical Health Outcome	Study	Statistic
Alcohol Use		
	Coxell et al., 1999	OR= 1.89
	Hequembourg et al., 2011	*V*= .11
	Murdoch et al., 2007	*r*= .19
	Nayak et al., 2012	OR= 2.91
	Ratner et al., 2003	OR= 2.71
	Smith & Breiding, 2011	OR= 1.56
	Turchik, 2012	*r*= .19
Illicit Drug Use		
	Amos et al., 2005	OR= 5.00 (past month) OR= 9.80 (past year)
	Cucciare et al., 2011	OR=2.89
	Hequembourg et al., 2011	Average *V*= .13
	Hidaka et al., 2014	OR= 1.57
	Pimlott-Kubiak & Cortina, 2003	*r*= .29
	Snipes et al., 2014	Average ρ= .27
	Turchik, 2012	*r*= .17
Somatic Symptoms		
	Golding, 1999	Average OR= 2.8
	Murdoch et al., 2007	*r*= .87
	Próspero & Fawson, 2010	*r*= .81
	Walker et al., 2005b	*r*= .32
Sexual Dysfunction		
	Elliott et al., 2004	*r*= .30
	Turchik, 2012	*r*= .35
STI/HIV Prevalence		
	Hequembourg et al., 2011	η2= .03
	Hidaka et al., 2014	OR= 1.57
	Smith & Breiding, 2011	OR= 3.63
Tobacco Use		
	Choudhary, 2008	OR= 4.31
	Smith & Breiding, 2011	OR= 2.10
	Turchik, 2012	*r*= .12